

# Hierarchical Investigation of Socioeconomic Drivers of Decadal Scale Land-Cover changes in the Upper Midwest

P.I. Daniel Brown, Michigan State University

Develop a model that projects spatial patterns of land use given socio-economic scenarios in Upper Midwest, North America.

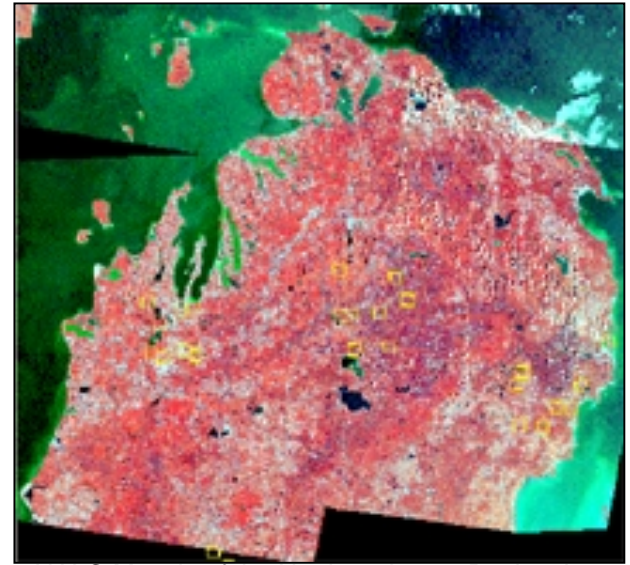
Using Landsat MSS, air photos and plat maps attribute confidence limits to estimates of forest fragmentation from North American Landscape Characterization (NALC) data. Link to census data for artificial neural network analysis

Results indicate that land cover changes in Upper Midwest are attributable to: agricultural abandonment, urban expansion, urban-rural migration, recreation and tourism development.

## Projected Applications:

- Inclusion of agricultural changes in predictive models of carbon sequestration for Upper Midwest region.

- Provides land use change information for USGCRP National Assessment of system response to climate change



NALC Mosaic of the Northern Lower Peninsula of Michigan 1991

